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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,704	02/26/2002	John Gerard Beerends	PTT-133(402582US)	3989

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EXAMINER

ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
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2626

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/069,704	Applicant(s) BEERENDS, JOHN GERARD	
	Examiner Angela A. Armstrong	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawing changes were received on January 19, 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karlsen (WO 97/15124) in view of Hollier (WO 94/00922).
3. Regarding claim 21, Karlsen discloses measuring a talking quality of a telephone link I a telecommunication network, (page 3, line 19 to page 8, line 12); combining a talker speech signal and a returned signal ($r(t)$), which occurred in a return channel of the telephone link as a consequence of the transmission of the talker speech signal in a forward channel of the telephone link (page 4, lines 7-10, in which Karlsen describes the echo canceller at the near end and specifically states a similar arrangement is provided at the far end side as Figure 1 specifically shows echo generation in the telephony system such that the echo is generated at both ends) to a combined speech signal $s'(t)$ (page 3, line 19 to page 8, line 12); subjecting the combined speech signal to a quality measurement (page 7, line 7 to page 8, line 12).

Karlsen does not specifically teach implementation of an objective measurement for measuring a perceptual quality of speech signals and producing an output signal, which represents an estimated value concerning the talking quality. However, implementation of objective speech quality measurements of telecommunications equipment was well known in the art, so as to efficiently detect the degradation of signals transmitted over communication links.

In a similar field of endeavor, Hollier teaches a method and apparatus for objective speech quality measurements of telecommunications equipment, which measures a perceptual quality of speech signals and producing an output signal which represents an estimated value of the acceptability of the telecommunications apparatus (page 7, line 14 to page 8, line 10; page 11, line 20 to page 13, line 26).

It would have been obvious to one of ordinary skill at the time of the invention to modify the system of Karlsen to implement an objective measurement of the perceptual quality of the speech signals, as suggested by Hollier, for the purpose of detecting any degradation of the signals transmitted and thereby verifying the quality of the adaptation of the filter of Karlsen.

Regarding claims 22 and 26-27, the teachings of Karlsen and Hollier provide support for the combining step comprises a signal addition of the returned signal and the talker speech signal (page 4, lines 7-15).

Regarding claim 23, the teachings of Karlsen and Hollier provide support for inverse filters (page 3, line 19 to page 8, line 12).

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Regarding claims 24-25 and 28, the teachings of Karlsen and Hollier provide support for the talker signal and returned signal are obtained from the telephone link (page 3, line 19 to page 4, line 6).

Regarding claim 29, the teachings of Karlsen and Hollier provide support for an echo-minimizing device included in the telephone link (page 7, line 7 to page 8, line 12).

Regarding claim 30, the teachings of Karlsen and Hollier provide support for a monitoring system (page 3, line 19 to page 8, line 12).

Regarding claim 31, the teachings of Karlsen and Hollier provide support for storing signals (page 7, line 14 to page 8, line 10; page 11, line 20 to page 13, line 26).

Regarding claims 32-40, claims 32-40 are apparatus and circuitry claims similar in scope and content to method claims 21-31, and are therefore rejected under similar rationale.

Response to Arguments

4. Applicant's arguments filed January 19, 2006 have been fully considered but they are not persuasive.

Applicant argues both the Karlsen and Hollier applications are utterly devoid of any teachings regarding measuring talking quality for measuring the influence of echo on the perceptual quality on the talker's side of a telephone link or that neither the Karlsen nor the Hollier applications teaches combining speech and returned signals in the same or even a similar manner as taught by the present invention. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually

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where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues the Karlsen and the Hollier applications do not contain any incentives to apply a perceptual speech quality measurement for minimizing echo. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Hollier teaches a method and apparatus for objective speech quality measurements of telecommunications equipment, which measures a perceptual quality of speech signals and producing an output signal which represents an estimated value of the acceptability of the telecommunications apparatus, and one of ordinary skill would recognize the advantages of modifying the system of Karlsen to implement an objective measurement of the perceptual quality of the speech signals, as suggested by Hollier, for the purpose of detecting any degradation of the signals transmitted improving the adaptive filter of Karlsen.

Applicant argues any combination of the teachings of the two applied prior art applications would yield an approach for providing a quality measure of the signal, produced by a communication system under test, for the listener's side, but not the talker's side. The Examiner disagrees and argues Karlsen describes the echo canceller at the near end and

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specifically states a similar arrangement is provided at the far end side as Figure 1 specifically shows echo generation in the telephony system such that the echo is generated at both ends.

Thus, since Karlsen specifically refers to the problem of echo generation at both the far end and near end and further indicates implementation of the echo canceller at both ends of the telecommunication system, the combination of the teachings of Karlsen and Hollier would indeed suggest to one of ordinary skill in the art, the approach of providing quality measure of the signal, produced by the communication system for the talker's side as well as the listener's side.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

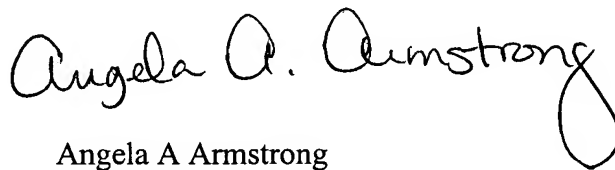
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Angela A. Armstrong". The signature is written in a cursive style with a large, looping "A" and "S".

Angela A Armstrong
Primary Examiner
Art Unit 2626

AAA
March 24, 2006